

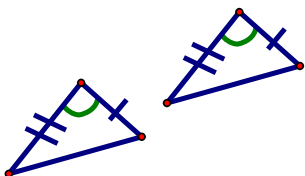
Name _____

Date _____

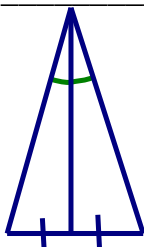
201 Congruent Triangles Packet

Determine if the given triangles are congruent. Use the given marks and mark vertical angles and reflexive. If they are congruent, state the reason why. (SAS, SSS, ASA, AAS, and HL.) If they are not congruent, write not.

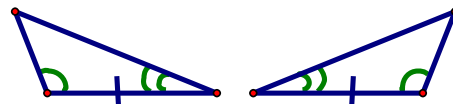
1. _____



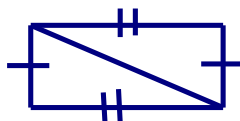
2. _____



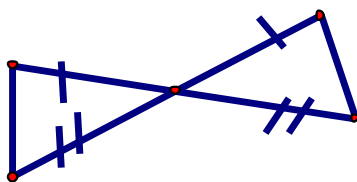
3. _____



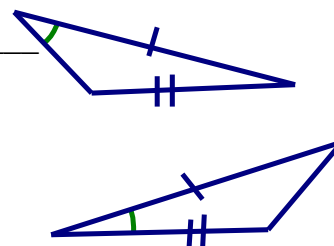
4. _____



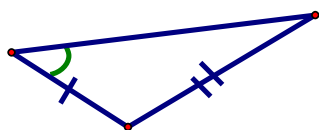
5. _____



6. _____



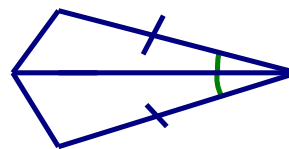
7. _____



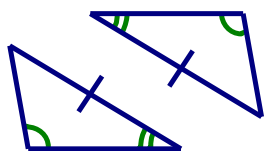
8. _____



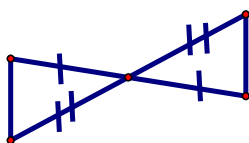
9. _____



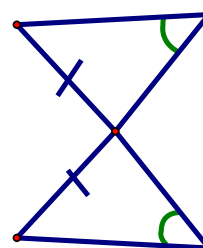
10. _____



11. _____

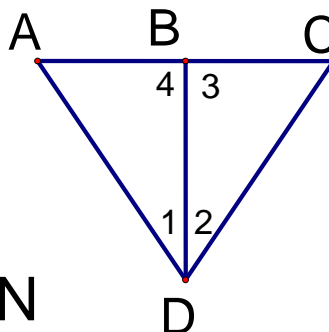


12. _____

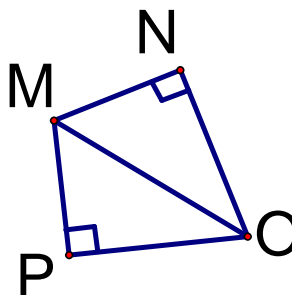


Part B: Use the given information to determine what triangles are congruent and the reason why. Mark the diagrams.

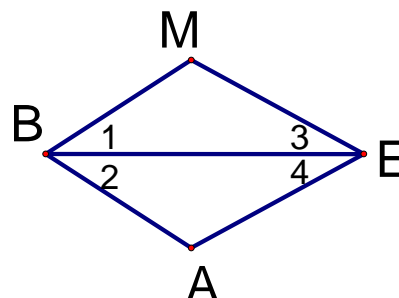
1. Given: \overline{BD} bisects $\angle ADC$; $\angle A \cong \angle C$
 $\triangle ABD \cong \triangle$ _____
 Why? _____



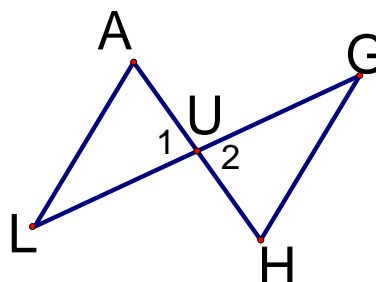
2. Given: $PO = NO$
 $\triangle MPO \cong \triangle$ _____
 Why? _____



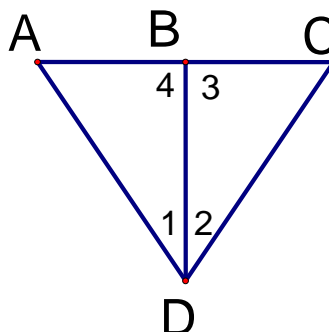
3. Given: \overline{BE} bisects $\angle MBA$; $BM = BA$
 $\triangle BME \cong \triangle$ _____
 Why? _____



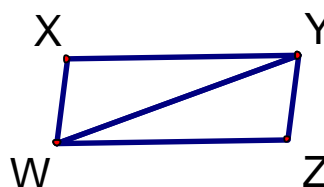
4. Given: U is the midpoint of \overline{LG} and \overline{AH}
 $\triangle LAU \cong \triangle$ _____
 Why? _____



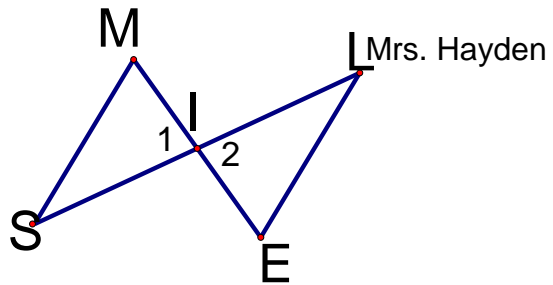
5. Given: B is the midpoint \overline{AC} ; $AD = CD$
 $\triangle BAD \cong \triangle$ _____
 Why? _____



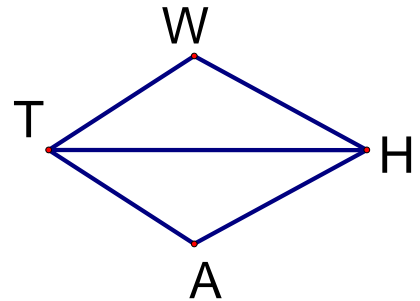
6. Given: $YZ = XW$; $\angle XWY \cong \angle WYZ$
 $\triangle WXY \cong \triangle$ _____
 Why? _____



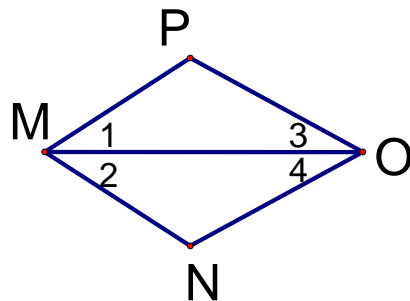
7. Given: $\overline{SM} \parallel \overline{LE}$; I is the midpoint of \overline{ME}
 $\triangle SMI \cong \triangle$ _____
 Why? _____



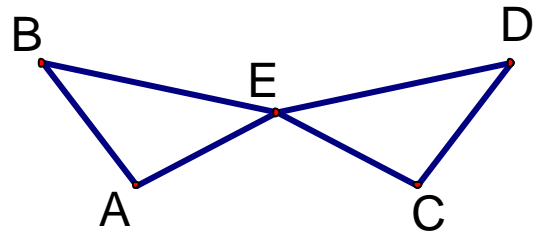
8. Given: $WT = HA$; $WH = AT$
 $\triangle WHT \cong \triangle$ _____
 Why? _____



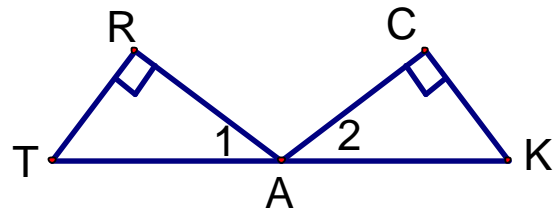
9. Given: \overline{MO} bisects $\angle PMN$ and $\angle PON$
 $\triangle PMO \cong \triangle$ _____
 Why? _____



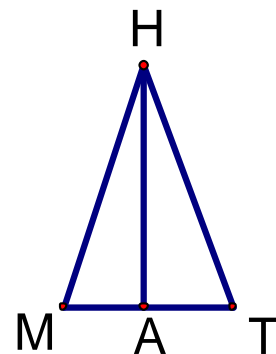
10. Given: $AE = CE$; $BE = DE$; $BA = DC$
 $\triangle BAE \cong \triangle$ _____
 Why? _____



11. Given: $\angle 1 \cong \angle 2$; $RA = CA$
 $\triangle TRA \cong \triangle$ _____
 Why? _____

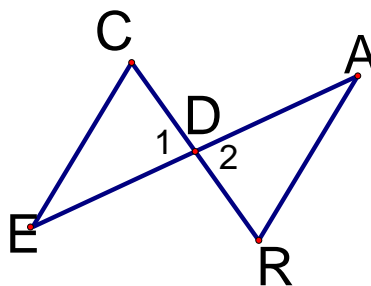


12. Given: $\overline{HA} \perp \overline{MT}$; $HM = HT$
 $\triangle MAH \cong \triangle$ _____
 Why? _____

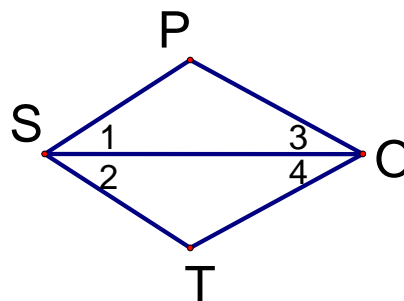


Part C: Write the following proofs.

1. Given: $\overline{CE} \parallel \overline{AR}$; D is the midpoint of \overline{CR}
 Prove: $\triangle CDE \cong \triangle RDA$



2. Given: \overline{SO} bisects $\angle PST$; $\overline{PS} \cong \overline{ST}$
 Prove: $\triangle PSO \cong \triangle TSO$



Complete this proof.

3. Given: \overline{BA} bisects $\angle CBD$; $\overline{BA} \perp \overline{CD}$
 Prove: $\triangle CAB \cong \triangle DAB$

Statements

Reasons

1.

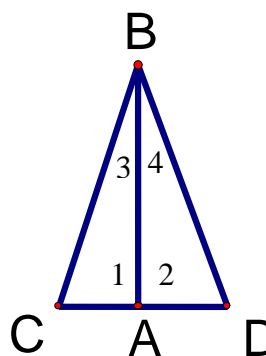
1.

2. $\angle 1$ is a right \angle
 $\angle 2$ is a right \angle

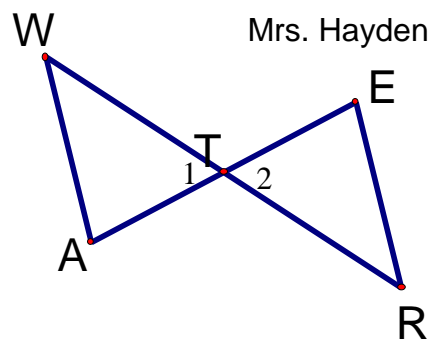
2.

3.

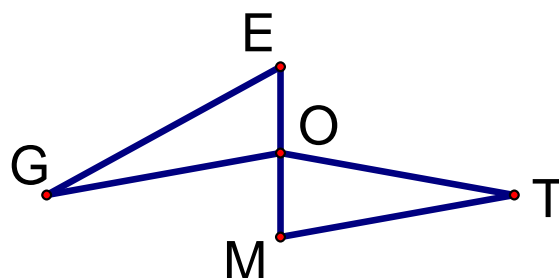
3. All right \angle s are \cong



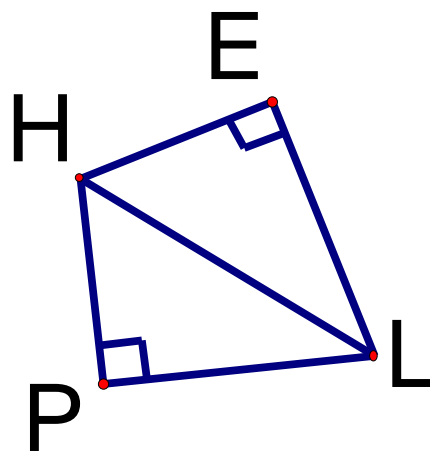
4. Given: T is the midpoint of \overline{WR} and \overline{AE}
 Prove: $\triangle WAT \cong \triangle RET$



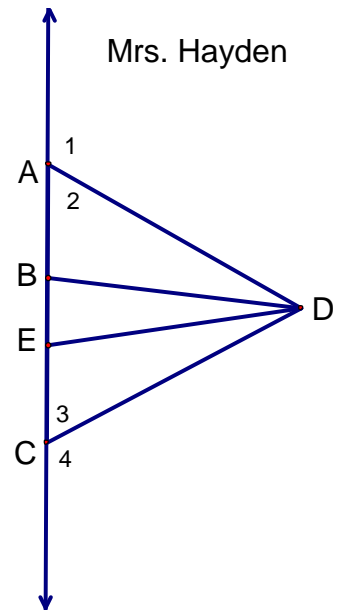
5. Given: O is the midpoint of \overline{EM} ;
 $\overline{GO} \cong \overline{OT}$; $\overline{GE} \cong \overline{MT}$
 Prove: $\triangle GEO \cong \triangle TMO$



6. Given: $\triangle ELH$ & $\triangle HPL$ are right triangles
 $\overline{EL} \cong \overline{PL}$
 Prove: $\triangle HLP \cong \triangle HLE$



7. Given: $\angle 1 \cong \angle 4$; $\overline{AB} \cong \overline{EC}$
 $\overline{DC} \cong \overline{DA}$
 Prove: $\triangle ABD \cong \triangle CED$



8. Given: $GI = VE$; $RG = NE$; $NI = RV$
 Prove: $\triangle RGV \cong \triangle NEI$

